For loop practice -

1. print all vowels from list of single chars ?

list = ["sriram","sairam","divakar","ravi","Raju"]

new = [] for i in list: for j in i:

if j in

"aeiouAEIOU":

new += j print(new)

o/p :-- ['i', 'a', 'a', 'i', 'a', 'i', 'a', 'a', 'a', 'i', 'a', 'u']

2. print all strs which are len > 5 and push to new list ?

list = ["sriram","sairam","divakar","ravi","Raju"]

new = [] for i in list: if len(i) > 5:

new.append(i) print(new)

o/p:-- ['sriram', 'sairam', 'divakar']

3. print all odd indices values in list ?

list = ["sriram","sairam","divakar","ravi","Raju",66,88,33.5,True,False]

new = [] for i in range(1,len(list),2):

new.append(list[i]) print(new) o/p:-

-- ['sairam', 'ravi', 66, 33.5, False]

4. print all odd indices values and find only str and that too len >3 and len<5 ? list

 list =

```
["sriram","sairam","divakar","ravi","Raju",66,88,33.5,True,False,"raviteja","raviraj
u"]

new = [] for i in range(1,len(list),2):

new.append(list[i])

# print(new) for j in

new:

# print(j)

if type(j) == str:

if

len(j) > 3 and len(j) < 5:

print(j) o/p:---

ravi
```

5. print all even indices values from list and push to new list .?

```
list =

["sriram","sairam","divakar","ravi","Raju",66,88,33.5,True,False,"raviteja","raviraj
u"]

new = []

 for i in range(0,len(list),2):

new.append(list[i]) print(new)

 o/p:--- ['sriram',

'divakar', 'Raju', 88, True, 'raviteja']
```

1

Python Real-Time Task-Based Questions

Question 1: Name Vowels from Long Names

Task: - List of 5 people - Check names with length > 5 - Extract vowels from those names - Store vowels in a

new list

```
list = ["sriram","sairam","divakar","ravi","raju"]

word = []

for i in list:

if len(i)>5:

for j in i:

if j in "aeiouAEIOU":

print(j)

word.append(j)

print(word)
```

o/p: -- ['i', 'a', 'a', 'i', 'a', 'i', 'a', 'a']

Question 2: Vowels from Odd Index in Sentence

Task: - Given a sentence - Pick characters at odd indices only - From those, extract vowels - Concatenate

those vowels and find length

```
str = str(input("enter the sentence:-- "))

list = ""

for i in range(0,len(str)):

if i % 2 != 0:

for j in str[i]:

if j in "aeiouAEIOU":

list += j
```

```python
print(j)

print(list)

print(len(list))1
```

o/p :-- enter the sentence:-- jnanasravanigeddada

a

a

i

e

aaie

4

Question 3: Concat Strings & Find Length from List

Task: - List with mixed items - Extract only strings - Concatenate all strings - Print total length of final string

```python
list = ["decentboy",22,"sriram",88.6,"kolla",(1,2,3,4),["a","b","c"],"17","95"]

set = ""

for i in range(0,len(list)):

if type(list[i]) == str:

for j in list[i]:

set += j

print(set)

print(len(set))
```

o/p :- decentboysriramkolla1795

length of the str : -- 24

Question 4: Extract 2-Digit Numbers from List

Task: - List with mixed data types (int, str, etc.) - Extract only numbers that are 2-digit (10 to 99) - Include

both integer and numeric strings - Push them into a new list and print it

Sir I don't how to do this could you please explain me in class

1. Print each character of a string.

Explanation: Use a for loop to iterate through each character in a string sequence.

A = str(input("enter the str :- "))

for i in A:

print(i)

o/p ; enter the str :- Sriram

S

r

i

r

a

m

2. Print all even numbers from a list.

Explanation: Iterate through a list and use a condition to check for even numbers.

list = [0,1,2,3,4,5,6,7,8,9,10,88,36,77,12,13,76,73,92,44,19,17]

for i in list:

if i % 2 == 0:

print(i)

o/p;-

0

2

4

6

8

1088

36

12

76

92

44

3. Calculate the sum of numbers in a tuple.

Explanation: Use a for loop to iterate through a tuple and keep adding each number to a

total variable.

tuple = (0,1,2,3,4,5,6,7,8,9,10,88,36,77,12,13,76,73,92,44,19,170)

total =0

for i in tuple:

total += i

print(total)

o/p:- 755

4. Print names from a list of strings.

Explanation: Loop through a list of names and print each one.

```python
name = ["sriram","sairam","ganesh","ravi","divakar","raju"]

for i in name:

print(i)
```

o/p:-

sriram

sairam

ganesh

ravi

divekar

raju**5. Print square of numbers using range.**

Explanation: Use range to generate numbers, then square each number inside the loop.

```python
num = int(input(" enter num :- "))

for i in range(1,num+1):

print(i ** 2)
```

o/p:

enter num :- 4

1

4

9

16

6. Count vowels in a string.

Explanation: Loop through each character and check if it is a vowel using a condition.

```python
vowels = str(input(" enter str :- "))

count = 0
```

for char in vowels:

if char in ["a","e","i","o","u"]:

count = count + 1

print(count)

o/p : - enter str :- sriram

2

7. Reverse a string using for loop.

Explanation: Iterate through the string and build a new reversed string by prepending

characters.

str = str(input(" enter str :- "))

for i in range(0,len(str)):

if str[i]:

print(str[::-1])

o/p: - enter str :- sriram

marirs

marirs

marirs

marirs

marirs

marirs

8. Check if elements in list are positive.

Explanation: Use a loop and condition to check and print whether each element is
positive

or not.

```
element = [1,-2,3,4,6,7,8,-4,-9,-10,11,12]

for i in element:

if i >=0 :

print(i,"positive")
```

o/p:-

1 positive

3 positive

4 positive

6 positive

7 positive

8 positive

11 positive

12 positive**9. Print odd-indexed characters in a string.**

Explanation: Use range and indexing to print characters that are at odd-numbered

positions.

```
str = str(input("enter the str : - "))

for i in range(1,len(str)):

if i % 2 != 0:

print(str[i])
```

o/p:--

enter the str : - sriram

r

r

m

10. Print multiples of 3 using range.

Explanation: Use range and an if condition to print numbers divisible by 3.

num = int(input("enter the num : - "))

for i in range(1,num):

if i % 3 ==0:

print(i,"is divisiable")

o/p:-- enter the num : - 56

3 is divisiable

6 is divisiable

9 is divisiable

12 is divisiable

15 is divisiable

18 is divisiable

21 is divisiable

24 is divisiable27 is divisiable

30 is divisiable

33 is divisiable

36 is divisiable

39 is divisiable

42 is divisiable

45 is divisiable

48 is divisiable

51 is divisiable

54 is divisiable

11. Find the product of numbers in a list.

Explanation: Iterate through the list and multiply each number to get the final product.

num = [1,2,3,4,5,6,7,8,9]

total =1

for i in num:

total = i * total

print(total)

o/p:- 362880

12. Count how many times a specific character appears in a string.

Explanation: Loop through the string and count how many times a specific character appears.

str = str(input("enter the str:- "))

count = 0

for i in str:

if "r" in i:

count = count +1

print(count)o/p:-- enter the str:- sriram

2

13. Print each element of a tuple with its index.

Explanation: Use range and indexing to print the index and corresponding element in the tuple.

tuple = ("sri",1,"ram",1.3,[1,2,3])

for i in range(0,len(tuple)):

print(i,tuple[i])

o/p:--

0 sri

1 1

2 ram

3 1.3

4 [1, 2, 3]

14. Print numbers from 10 to 1 using range.

Explanation: Use a reversed range to print numbers in descending order.

for i in range(10,0,-1):

print(i)

o/p:

10

9

8

7

6

5

4

32

1

15. Convert each string in a list to uppercase.

Explanation: Loop through a list of strings and convert each one to uppercase.

str = ["sri","ram","sai","ram"]

for i in str:

print(i.upper())

o/p:

SRI

RAM

SAI

RAM

Nested List Extractor

Given two lists containing mixed data types (strings, integers, floats, and nested lists), write

a Python program to:

1. Iterate through both lists using a for loop.

2. Identify and extract all elements that are of list type.

3. Store and print all extracted lists in a new list.

🧠 **Expected Concepts Used:**

• for loop

• range() and len()

• type() function

• List operations and .append()

```
str = []
a = ["sri",88,88.4,["S","a","j"],[6,7,3,9]]b = ["sai",99.0,66,["a","k","l","i"],[9,3,4,5]]
for i in range(0,len(a)):
if type(a[i]) == list:
str.append(a[i])
print(str)
```

```
for i in range(0,len(b)):

if type(b[i]) == list:

str.append(b[i])

print(str)
```

o/p: [['S', 'a', 'j'], [6, 7, 3, 9]]

[['S', 'a', 'j'], [6, 7, 3, 9], ['a', 'k', 'l', 'i'], [9, 3, 4, 5]]

1 Print Numbers 1 to 10

Use a for loop to print numbers from 1 to 10.

```
for i in range(1,11):

print(i)
```

o/p: 1

2

3

4

5

6

7

8

9

10